IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application : **10/520,199**

Applicant(s) : **BODLAENDER, Maarten Peter**

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Title: **METHOD AND APPARATUS FOR CLASSIFICATION OF DATA OBJECT IN A DATABASE**

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APPEAL UNDER 37 CFR 41.37

Sir:

This is an appeal from the decision of the Examiner dated 27 June 2007, finally rejecting claims 1-20 of the subject application.

This paper includes (each beginning on a separate sheet):

1. **Appeal Brief;**
2. **Claims Appendix;**
3. **Evidence Appendix; and**
4. **Related Proceedings Appendix.**

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The above-identified application is assigned, in its entirety, to **Koninklijke Philips Electronics N. V.**

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any co-pending appeal or interference that will directly affect, or be directly affected by, or have any bearing on, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claim 6 is canceled.

Claims 1-5 and 7-20 are pending in the application.

Claims 1-5, 7, and 9-20 stand rejected by the Examiner under 35 U.S.C. 102(b).

Claim 8 stands rejected by the Examiner under 35 U.S.C. 103(a).

These rejected claims are the subject of this appeal.

IV. STATUS OF AMENDMENTS

An amendment was filed on 27 August 2007, and admitted subsequent to the final rejection in the Office Action dated 27 June 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER

This invention addresses automated classification of objects, such as photographs, to facilitate subsequent retrieval of the objects based on their classification. When an object is created, a number of parameters, such as date, time, and location of creation are associated with the object (page 5, lines 15-18; columns of table 300 in FIG. 3). A classification (C1-C4; rows of table 300; 202, 204 of FIG. 2) of an object corresponds to these parameters satisfying one or more criteria (R1, V1, etc.); a given object may be associated with a plurality (202, 204) of classifications (page 5, lines 19-25). These associations are stored for subsequent search tasks (page 4, lines 20-26). Because each classification may include subsets of multiple parameter values, searching for an object based on classification can be substantially more efficient than searches based on individual parameters (page 2, lines 5-8). In an embodiment of this invention, the criteria used for deciding whether an object should be associated with a given classification is dynamically determined, thereby simplifying the classification process (page 5, lines 26-30). The individual parameters of objects that have already been classified are assessed to determine a range/variance of values for select parameters corresponding to each particular classification (page 6, lines 4-13; page 7, lines 4-8). If the object being classified satisfies a range-based criterion for the select parameters of a particular classification, it is associated with that classification (page 6, lines 29-34; page 7, lines 4-8).

Independent claim 1 recites a method for classification of a data object in a database, comprising (FIG. 4):

obtaining at least one source parameter associated with the data object (page 3, lines 27-29), and

associating a classification parameter with the data object based on a value of the at least one source parameter satisfying at least one criterion corresponding to the classification parameter (page 4, lines 27-30),

wherein the database (100) includes further data objects having at least one further source parameter associated therewith (page 4, lines 30-32) and wherein the method includes:

identifying (403) similar further data objects having equal values of at least one further classification parameter (page 5, line 33 - page 6, line 1);

identifying (404) similarity of values of the further source parameter of the further similar data objects having equal further classification parameters (page 6, lines 4-6); and

associating (420) the further classification parameter with the data object when (411) at least one of the at least one source parameter of the data object is similar to the further source parameter of the further similar data objects (page 6, lines 29-33; page 7, lines 5-8).

Dependent claim 7 recites the method of claim 1, wherein the value of the further classification parameter and the similarity of values as a criterion for associating a new data object with the further classification parameter with the value are stored in a further database (page 2, lines 23-25).

Dependent claim 8 recites the method of claim 7, wherein the method includes searching the further database to check whether one or more of the at least one source parameter of the data object matches at least one criterion stored in the further database (page 7, lines 13-16).

Independent claim 17 recites an apparatus (FIG. 5) for classification of a data object in a database, the data object having at least one source parameter associated therewith, the apparatus comprising:

a storage device (502) that is configured to store the database,

a receiver (503) that is configured to receive data objects, and

a central processing unit (501), wherein the central processing unit is configured to associate a classification parameter with the data object when the source parameter satisfies at least one criterion related to the classification parameter (page 8, lines 10-12),

wherein the database includes further data objects having at least one further source parameter associated therewith and wherein the central processing unit is configured to (page 8, lines 7-9):

identify similar further data objects having equal values of the at least one further classification parameter (page 6, line 4);

identify similarity of values of the further source parameter of the further similar data objects having equal further classification parameters (page 6, lines 4-6); and

associate the further classification parameter with the data object when at least one of the at least one source parameter of the data object is similar to the further source parameter of the further similar data objects (page 6, lines 28-34; page 7, lines 4-8).

Independent claim 19 recites a method comprising:

obtaining an image object and one or more source parameters associated with the image object, the image object including one of: an encoded image and an encoded sequence of images (page 3, lines 21-22; lines 27-29),

determining a classification parameter associated with the image object based on at least one of the one or more source parameters (page 4, lines 27-30), and

storing the image object and the associated classification parameter in a database that includes other objects with associated classification parameters (page 4, lines 20-26),

wherein the database includes further data objects having at least one further source parameter associated therewith and wherein the method includes (FIG. 4):

identifying (403) similar further data objects having equal values of at least one further classification parameter (page 6, line 4);

identifying (404) similarity of values of the further source parameter of the further similar data objects having equal further classification parameters (page 6, lines 4-6); and

associating (420) the further classification parameter with the data object when (411) at least one of the at least one source parameter of the data object is similar to the further source parameter of the further similar data objects (page 6, lines 28-34; page 7, lines 4-8).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-5, 7, and 9-20 stand rejected under 35 U.S.C. 102(b) over Hewagamage et al. ("Augmented Album: Situation-dependent System for a Personal Digital Video/Image Collection", hereinafter Hewagamage).

Claim 8 stands rejected under 35 U.S.C. 103(a) over Hewagamage and Shiomi et al. (USP 6,009,439, hereinafter Shiomi).

VII. ARGUMENT

Claims 1-5, 7, and 9-20 stand rejected under 35 U.S.C. 102(b) over Hewagamage

MPEP 2131 states:

> "A claim is anticipated only if ***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The ***identical invention*** must be shown in as ***complete detail*** as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1-5, 7, 9-20

Independent claims 1 and 19, upon which claims 2-5, 7-16, 18, and 20 depend, recite a method for classification of a data object in a database that includes associating a classification parameter with a data object based on a value of a source parameter, identifying similarity of values of a further source parameter of further data objects having equal further classification parameters; and associating the further classification parameter with the data object when a source parameter of the data object is similar to the further source parameter. Claim 17 recites an apparatus that includes similar limitations.

Hewagamage does not teach identifying similarity of values of a further source parameter of further data objects having equal further classification parameters, and does not teach associating a further classification parameter with a data object when a source parameter of the data object is similar to a further source parameter.

Hewagamage teaches a conventional image storage and retrieval system based on source parameters; Hewagamage does not teach associating a classification parameter with a data object based on these source parameters. Hewagamage specifically teaches:

> "The user interacts with the system by three components, Map Component, Time Frame Component, and Events Component ***that correspond to parameters used*** in interpreting the user-situation". (Hewagamage, page 325, left column, lines 25-29.)

The parameters used in Hewagamage are time, location, and event, and these parameters are associated with the image when the image is created/stored. Time and location are identified using conventional techniques, such as GPS; events are identified based on a user's personal calendar/scheduler, or based on direct user input. The triplet of time, location, and event forms the 'context' of each image:

> "In this paper we take three parameters into account to interpret user's active context as we treat the personal photographing is a mobile user activity, namely the user's geographic location, time and corresponding events that motivate the user to take pictures." (Hewagamage, page 323, right column, lines 9-14.)

Hewagamage uses the stored parameters to provide context-based selection of data objects. Hewagamage does not teach any other classification of the data objects beyond the three source parameters of location, time, and event.

The Office action equates Hewagamage's location and time parameters as source parameters, and Hewagamage's event parameter as a classification parameter (Office action, page 6, lines 12-16). Assuming, ***in argument***, that Hewagamage's event parameter is a classification parameter based on the location and/or time parameter, the Office action fails to identify where Hewagamage teaches a *further* classification parameter and identifying a similarity of values of further source parameters having this same further classification parameter, and fails to identify where Hewagamage teaches associating this further classification parameter to a data object when a source parameter of the data object is similar to the further source parameter.

The Office action refers to the techniques used by Hewagamage to provide a display of icons corresponding to the data objects as a function of the source parameters, but fails to identify, in the presentation of this icon display, which elements in Hewagamage correspond to the claimed further classification parameter that is common to other data objects, and fails to identify which elements in Hewagamage correspond to the claimed further source parameters of these other data objects, among which a similarity is determined.

The Board of Patent Appeals and Interferences has consistently upheld the principle that the burden of establishing a prima facie case resides with the Office,

and to meet this burden, the Examiner must specifically identify where each of the claimed elements are found in the prior art:

> "there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech, Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). To meet [the] burden of establishing a prima facie case of anticipation, the examiner must explain how the rejected claims are anticipated by pointing out where ***all*** of the specific limitations recited in the rejected claims are found in the prior art relied upon in the rejection." *Ex Parte Naoya Isoda*, Appeal No. 2005-2289, Application 10/064,508 (BPAI Opinion October 2005).

Because the Office action has failed to identify where Hewagamage teaches identifying similarity of values of a further source parameter of further data objects having equal further classification parameters, and where Hewagamage teaches associating the further classification parameter with the data object when a source parameter of the data object is similar to the further source parameter, the applicant respectfully maintains that the Office action fails to establish a prima facie case to support the rejection of claims 1 and 17. Accordingly, the applicant respectfully requests that the rejection of claims 1-5, 7, and 9-18 under 35 U.S.C. 102(b) over Hewagamage be reversed by the Board.

Claim 7

Claim 7 recites that the value of the further classification parameter and the similarity of values as a criterion for associating a new data object with the further classification parameter with the value are stored in a further database.

Assuming, ***in argument***, that Hewagamage's event parameter corresponds to the claimed classification parameter based on the source location and/or time parameters, Hewagamage fails to teach storing further classification parameters and similarity value criterion for associating a new data object with the further classification parameter, and the Office action fails to identify where Hewagamage provides this teaching. Accordingly, the applicant respectfully requests that the rejection of claim 7 under 35 U.S.C. 102(b) over Hewagamage be reversed by the Board.

Claim 8 stands rejected under 35 U.S.C. 103(a) over Hewagamage and Shiomi

Claim 8

Claim 8 includes storing the value of the further classification parameter and the similarity of values as a criterion for associating a new data object with the further classification parameter with the value, and searching the further database to check whether one or more of the at least one source parameter of the data object matches at least one criterion stored in the further database.

Claim 8 depends upon claims 1 and 7, and in this rejection, the Office action relies on Hewagamage for teaching the elements of claims 1 and 7. As discussed above, Hewagamage does not teach or suggest the elements of either claim 1 or claim 7. Accordingly, the applicant respectfully requests that the rejection of claim 8 under 35 U.S.C. 103(a) that relies on Hewagamage for teaching the elements of claims 1 and 7 be reversed by the Board.

Further, in this rejection, the Office action asserts that Hewagamage's three display components, the Map, Time Frame, and Events Components, correspond to three databases (Office action, page 15, lines 5-6 of Section 4). The applicant respectfully disagrees with this assertion. Hewagamage specifically defines these components as processes that provide situation-dependent browsing. The applicant respectfully maintains that a process is not a database, as the terms process and database are conventionally used in the art. Accordingly, the applicant respectfully requests that the rejection of claim 8 under 35 U.S.C. 103(a) that relies on Hewagamage for teaching multiple databases be reversed by the Board.

CONCLUSIONS

Because Hewagamage fails to teach the elements of each of the applicant's independent claims 1, 17, and 19, and because the Office action fails to identify where Hewagamage teaches a further classification parameter that is common to other data objects with further source parameters from which a similarity is determined for associating this further classification parameter with a data object, the applicant respectfully requests that the Examiner's rejection of claims 1-5, 7, and 9-20 under 35 U.S.C. 102(b) over Hewagamage be reversed by the Board, and the claims be allowed to pass to issue.

Because Hewagamage fails to teach storing a further classification parameter and similarity values of source parameters of objects having equal further classification parameters, the applicant respectfully requests that the Examiner's rejection of claim 7 under 35 U.S.C. 102(b) over Hewagamage be reversed by the Board, and the claim be allowed to pass to issue.

Because Hewagamage's three display components do not correspond to different databases, as asserted and relied upon to support the rejection of claim 8, the applicant respectfully requests that the Examiner's rejection of claim 8 under 35 U.S.C. 103(a) over Hewagamage and Shiomi be reversed by the Board, and the claim be allowed to pass to issue.

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CLAIMS APPENDIX

1. A method for classification of a data object in a database, comprising:

obtaining at least one source parameter associated with the data object, and

associating a classification parameter with the data object based on a value of the at least one source parameter satisfying at least one criterion corresponding to the classification parameter,

wherein the database includes further data objects having at least one further source parameter associated therewith and wherein the method includes:

identifying similar further data objects having equal values of at least one further classification parameter;

identifying similarity of values of the further source parameter of the further similar data objects having equal further classification parameters; and

associating the further classification parameter with the data object when at least one of the at least one source parameter of the data object is similar to the further source parameter of the further similar data objects.

2. A method as claimed in claim 1, including

storing the classification parameter with the data object when the data object is entered into the database.

3. A method according to claim 1, wherein the criterion includes whether the value of the at least one source parameter is within a predetermined range.

4. A method according to claim 3, wherein the at least one source parameter represents a geographical location of the creation of the data object, and the criterion includes determining whether the creation of the data object has taken place in a predetermined region based on the geographical location.

5. A method according to claim 1, wherein the criterion includes determining whether the value of the source parameter equals a predetermined value.

6. (Canceled)

7. A method as claimed in claim 1, wherein the value of the further classification parameter and the similarity of values as a criterion for associating a new data object with the further classification parameter with the value are stored in a further database.

8. A method according to claim 7, wherein the method includes searching the further database to check whether one or more of the at least one source parameter of the data object matches at least one criterion stored in the further database.

9. A method according to claim 1, wherein the value of the further source parameter is an alphanumerical string and the similarity of values is identified as the further source parameters having equal values.

10. A method according to claim 1, wherein the value of the further source parameter is a numerical value and the similarity of values is identified as the further source parameters having values in a predetermined range.

11. A method according to claim 3, wherein the source parameter represents at least one of the following:

a geographical location of the creation of the data object,
a date of creation of the data object,
a time of creation of the data object,
a name of the creator of the data object, and
a data format of the data object.

12. A method according to claim 1, wherein the classification parameter corresponds to an event.

13. A method according to claim 1, wherein the data object includes a still picture image.

14. A method according to claim 1, wherein the data object includes a stream of audiovisual information.

15. A method according to claim 1, wherein the classification parameter is associated with the data object by a user.

16. A method according to claim 1, including storing the criterion in a further database.

17. An apparatus for classification of a data object in a database, the data object having at least one source parameter associated therewith, the apparatus comprising:

a storage device that is configured to store the database,

a receiver that is configured to receive data objects, and

a central processing unit, wherein the central processing unit is configured to associate a classification parameter with the data object when the source parameter satisfies at least one criterion related to the classification parameter,

wherein the database includes further data objects having at least one further source parameter associated therewith and wherein the central processing unit is configured to:

identify similar further data objects having equal values of the at least one further classification parameter;

identify similarity of values of the further source parameter of the further similar data objects having equal further classification parameters; and

associate the further classification parameter with the data object when at least one of the at least one source parameter of the data object is similar to the further source parameter of the further similar data objects.

18. A computer-readable medium comprising instructions that are readable and executable by a computer, wherein the instructions enable a computer to execute the method according to claim 1.

19. A method comprising:

obtaining an image object and one or more source parameters associated with the image object, the image object including one of: an encoded image and an encoded sequence of images,

determining a classification parameter associated with the image object based on at least one of the one or more source parameters, and

storing the image object and the associated classification parameter in a database that includes other objects with associated classification parameters,

wherein the database includes further data objects having at least one further source parameter associated therewith and wherein the method includes:

identifying similar further data objects having equal values of at least one further classification parameter;

identifying similarity of values of the further source parameter of the further similar data objects having equal further classification parameters; and

associating the further classification parameter with the data object when at least one of the at least one source parameter of the data object is similar to the further source parameter of the further similar data objects.

20. The method of claim 19, including retrieving the image object from the database based on the classification parameter.

EVIDENCE APPENDIX

No evidence has been submitted that is relied upon by the appellant in this appeal.

RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have any bearing on the Board's decision in the pending appeal.